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Letter
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TEXTILE TESTING EQUIPMENT

By Josephine M. Blandford

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I. INTRODUCTION

This letter circular lists equipment used in textile testing laboratories in the United States, the names and addresses of manufacturers or dealers from whom the equipment can be purchased, and literature about the equipment or its utilization, other than the descriptive literature obtainable from the suppliers. It has been prepared for use in answering requests for information about equipment and sources of supply. The list of equipment is by no means complete as laboratories are continually developing new equipment, and suppliers are offering new and improved equipment for purchase.

The listing of a testing device or source of supply does not constitute endorsement by the National Bureau of Standards. Inquiries regarding the purchase of equipment should be addressed to the supplier and not to the National Bureau of Standards.

References are given to representative literature describing the equipment and its uses. The suppliers may be able to provide additional references to the literature.

Government publications, unless otherwise stated, may be purchased, for the prices indicated, from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Remittance should be made by coupons (obtainable from the Superintendent of Documents in sets of 20 for $1.00 and good until used), or by check or money order payable to the "Superintendent of Documents", transmitted with the order. Stamps are not acceptable.

Government publications may be consulted in many Government, technical, college, and public libraries throughout the States. Whether or not a given library has a copy of any particular publication can only be determined by inquiring at the library.

Non-Government publications usually may be consulted in libraries. They are not obtainable from the National Bureau of Standards but often may be obtained from the publishers.

II. EQUIPMENT LIST

The names of equipment and of the characteristics for which tests are performed are given in alphabetical order. After each is the key name of the supplier, the full name and address of each being given in Section III. "Ref.", followed by a number, indicates the literature reference cited in Section IV.

ABRASION RESISTANCE, CARPET
    CARPET TESTING MACHINE, STEWART: Stewart. Ref. 1
    CARPET WEAR TESTING MACHINE, NBS: Frazier; U.S. Testing. Ref. 1

ABRASION RESISTANCE, CLOTH
    ABRADER, SCHOPPER: Testing Machines. Ref. 2
    ABRASER, TABER: Taber. Ref. 3, 4
    ABRASION MACHINE, RAVEN: Hamblett. Ref. 5
    ABRASION TESTING MACHINE, SCHIEFER: Frazier. Ref. 6, 7, 8
    FLEX AND FOLD TESTING APPARATUS: Custom. Ref. 8, 9, 10
    WEAR TESTER, PRECISION: Wyzenbeek. Ref. 11, 12
    WEAR TESTER, UNIVERSAL: Custom. Ref. 13, 14, 15

ABRASION RESISTANCE, YARN
    YARN ABRADER, WALKER: U. S. Testing.

AIR PERMEABILITY - See PERMEABILITY, AIR

AREALOMETER - See FINENESS OF FIBER

ATMOSPHERIC GAS FADING - See COLORFASTNESS TO ATMOSPHERIC FADING

BALANCES - See WEIGHT

BALL BURST TESTER - See STRENGTH, BURSTING

CHEMICAL LABORATORY EQUIPMENT:
American Instrument; Andrew; Baker; Boder; Burrell; Central; Coleman; Eimer; Emerson; Fisher; Mallinckrodt; Merck; Precision; Sutor; Thomas, Arthur H.; Western; Will.

COLOR MEASURING EQUIPMENT (Photometers, colorimeters, spectrophotometers) - Also see LAMPS, DAYLIGHT
A.A.T.C.C.; American Instrument; Boder; Coleman; Gardner; General Electric; Leitz; Macbeth Corp.; Perkin; Photovolt; U. S. Testing.
COLOR AND COLOR DIFFERENCE METER, HUNTER: Gardner. Ref. 16, 17, 18
COLOR-EYE: Instrument Development. Ref. 19
COLORIMETER, SPENCER: American Optical
COTTON COLORIMETER, NICKERSON-HUNTER: Gardner. Ref. 20, 21, 22
GLOSS RECORDER, HUNTER: Gardner
MULTIPURPOSE REFLECTOMETER, HUNTER: Gardner. Ref. 23, 24

COLORFASTNESS TO ATMOSPHERIC FADING
GAS-FADING APPARATUS (A.A.T.C.C. - U. S. Testing Co., Inc.): U. S. Testing. Ref. 25, 26, 118

COLORFASTNESS TO LAUNDERING
LAUNDER-OMETER: Atlas. Ref. 27, 28, 29, 30, 118

COLORFASTNESS TO LIGHT
FADE-OMETER: Atlas. Ref. 31, 32, 33, 34, 35, 118

COLORFASTNESS TO PERSPIRATION
PERSPIROMETER: Orange. Ref. 36, 37

COLORFASTNESS TO RUBBING (CROCKING)
CROCKMETER: A.A.T.C.C.; U. S. Testing. Ref. 38, 39, 118

COLORFASTNESS TO WEATHERING
NATIONAL WEATHERING UNIT: Atlas. Ref. 40
WEATHER-OMETER: Atlas. Ref. 41

COMPRESSIONAL CHARACTERISTICS - Also see THICKNESS
Dillon; Federal
COMPRESSION METER, DREWY: Frazier. Ref. 42, 43
COMPRESSOMETER (Schiefer): American Instrument; Frazier. Ref. 44, 45, 49, 67

CREASE RESISTANCE AND CREASE RECOVERY
FLEXOMETER - See FLEXURAL CHARACTERISTICS
ROLLER PRESSURE CREASE RECOVERY TESTER: American Cyanamid. Ref. 46, 47
WRINKLE RECOVERY TESTER, MONSANTO: Monsanto. Ref. 48, 49

CROCKMETER - See COLORFASTNESS TO RUBBING (CROCKING)

DENSOMETER - See PERMEABILITY, AIR

DETERGENCY COMPARATOR: Riggs. Ref. 50

DIAMATROL - See FINENESS OF FIBER

DIES (for cutting specimens): Fremont; Independent; Lonergan; United Shoe.

DRAPING CHARACTERISTICS - See FLEXURAL CHARACTERISTICS

DRAPEOMETER - See FLEXURAL CHARACTERISTICS

ELONGATION - See STRENGTH, BREAKING AND ELONGATION, TEARING

EVENNESS OF HOSIERY
HOSIERY EVENNESS GRADING CABINET: Sutor.

EVENNESS OF YARNS
ELECTRON MICROMETER, SERC: Standard Electronics.
EVENNESS TESTER, PACIFIC: Anderson. Ref. 51
YARN EVENNESS TESTER, USTER: Uster.
YARN KNOT AND SLUB COUNTER: Berkeley.

EXTENSOMETER - See STRENGTH OF FIBERS AND YARNS

FADE-OMETER - See COLORFASTNESS TO LIGHT

FIBER IDENTIFICATION (Ref. 119, 120, 121) - See MICROSCOPIC AND PHOTOMICROGRAPHIC EQUIPMENT
MICROTOME (Hardy-Type) - See FINENESS OF FIBER

FIBER SORTERS (length) - Also see LENGTH OF FIBER
COTTON SORTER, CAMBRIDGE: Cambridge.
DUPLEX COTTON FIBER SORTER, SUTER-WEBB: Sutor. Ref. 52, 73

FIBROGRAPH - See LENGTH OF FIBER

FINENESS OF FIBER
AREALOMETER: Special Instruments. Ref. 53
DIAMATROL: Harrington.
MICRONAIRE, SHEFFIELD: Sheffield.
MICROTOME (Hardy-Type): de la Rue; Mico. Ref. 54, 55, 56

FLAMMABILITY
FIRE RESISTANCE OF INDUSTRIAL FABRICS, AATCC TEST APPARATUS FOR: A.A.T.C.C. Ref. 57
FLAMMABILITY TESTER, AATCC: U. S. Testing. Ref. 58
HORIZONTAL RATE-OF-BURNING TESTER, NBS: Industrial Tool. Ref. 59, 60
VERTICAL FIELD TESTER, NBS: Ref. 61, 62

FLEX AND FOLD TESTING APPARATUS - See ABRASION RESISTANCE, CLOTH

FLEXOMETER - See FLEXURAL CHARACTERISTICS

FLEXURAL CHARACTERISTICS (Ref. 63, 124) - Also see STIFFNESS
DRAPEOMETER: Mico. Ref. 64
EXTENSOMETER, CAMBRIDGE FIBRE: Cambridge. Ref. 65
FLEX AND FOLD TESTING APPARATUS: See ABRASION RESISTANCE, CLOTH
FLEXOMETER: American Instrument. Ref. 66, 67
FOLDING TESTER, SCHOPPER: Testing Machines. Ref. 2
PLANOFLEX: Frazier. Ref. 43, 68

FLUORESCENCE - See LUMINESCENCE

FRICTION, COEFFICIENT OF
    FRICTION METER, DREBY: Frazier. Ref. 43, 69

GLOSS - See COLOR MEASURING EQUIPMENT

HAND - See COMPRESSIONAL CHARACTERISTICS; FLEXURAL CHARACTERISTICS; FRICTION

HOSIERY TESTERS - See EVENNESS OF HOSIERY; SHRINKAGE IN LAUNDERing
    HOSIERY LENGTH TESTER: Speizman.
    HOSIERY TESTING MACHINE, NBS: Frazier. Ref. 70
    SNAG TESTER, SANDPAPER. Ref. 71, 72
    SNAG TESTER, MANN: U. S. Testing. Ref. 70

HUMIDIFICATION EQUIPMENT:
    Abbeon; American Instrument; Baldwin; Carrier; Western.

HYDROSTATIC PRESSURE - See WATER RESISTANCE

HYGROMETERS:
    Eimer; Friez; Parks-Cramer; Western.

INCLINE PLANE TESTING MACHINE - See STRENGTH, BREAKING AND ELONGATION, TEARING

LAMPS, DAYLIGHT:
    American Optical; Bausch; Burrell; Macbeth Daylight.

LAUNDERING EQUIPMENT
    CENTRIFUGES: American Laundry; Ewing; General Electric; Hurley; Smith.
    PRESSES, FLAT BED: Franklyn; General Electric; U. S. Testing.
    WASHING MACHINES, REVERSING WASH WHEEL: Akron; American Laundry; Electric Household; Ewing.
    LAUNDER-OMETER - See COLORFASTNESS TO LAUNDERING
    TERG-O-TOMETER: U. S. Testing.

LAUNDER-OMETER - See COLORFASTNESS TO LAUNDERING

LENGTH OF FIBER - Also see FIBER SORTERS; FINENESS OF FIBER
    FIBROGRAPH: Special Instruments. Ref. 73
    USTER STAPLE APPARATUS: Uster.

LENGTH OF YARN - See YARN REELS

LOW TEMPERATURE RESISTANCE (Ref. 122, 123) (Some deep-freeze units sometimes used.)
    COLD CABINETS: American Instrument; Tenney.

LUMINESCENCE (Ref. 74)
    Bausch; Burrell; Switzer; Ultra-Violet.
    PHOTOMETER FOR LUMINESCENT MATERIALS (NBS). Ref. 75

LUNOMETER - See THREAD COUNT

MICRO-LINE COUNTER - See THREAD COUNT

MICROSCOPIC AND PHOTOMICROGRAPHIC EQUIPMENT:
American Optical; Andrew; Bausch; Boder; Burrell; Eimer; Fisher; Gardner; Hoffmann; Instrument Development; Leitz; Phipps; Scherr; Suter.

MILDEW RESISTANCE (Ref. 119, 120, 121)
AUTOCLAVES - See CHEMICAL LABORATORY EQUIPMENT
INCUBATORS: American Instrument; Tenney.

MULLEN TESTER - See STRENGTH, BURSTING

NARM SNAG TESTER - See HOSIERY TESTERS

OVENS, LABORATORY DRYING:
American Instrument; Andrew; Baird; Boder; Brabender; Central; Emerson; Fisher; Precision; Saxl; Suter; Testing Machines; U. S. Testing.

PARABOLIC RAM BURST TESTER - See STRENGTH, BURSTING

PERMEABILITY, AIR
AIR PERMEABILITY APPARATUS, NBS: American Instrument; Frazier. Ref. 76, 77
DENSOMETER: Gurley. Ref. 78

PERMEABILITY, GAS
FABRIC PERMEAMETER, CAMBRIDGE: Cambridge. Ref. 79

PERSPIROMETER - See COLORFASTNESS TO PERSPIRATION

pH METERS:
American Instrument; Analytical; Boder; Central; Coleman; Fisher; Leeds; Minneapolis; National; Photovolt; Thwing.

PHOSPHORESCENCE - See LUMINESCENCE

PICK-O-METER - See THREAD COUNT

PLANOFLEX - See FLEXURAL CHARACTERISTICS

PULSE PROPAGATION METER: Magnetic

PRESS, FLAT BED - See LAUNDERING EQUIPMENT

PRECISION WEAR TESTER - See ABRASION RESISTANCE, CLOTH

PRESSLEY FIBER STRENGTH TESTER - See STRENGTH OF FIBERS AND YARNS

RAIN TESTERS - See WATER RESISTANCE

REFLECTOMETER - See COLOR MEASURING EQUIPMENT

REFRACTION, INDEX OF
REFRACTOMETER, SPENCER: American Optical.

RESILIENCE, COMPRESSIONAL - See COMPRESSIONAL CHARACTERISTICS

RESILIENCE, FLEXURAL - See FLEXURAL CHARACTERISTICS

ROLLER PRESSURE CREASE RECOVERY TESTER - See CREASE RESISTANCE AND RECOVERY

RUBBING RESISTANCE - See COLORFASTNESS TO CROCKING (RUBBING)

SHRINKAGE IN LAUNDERING (Ref. 80, 81, 82, 118) - See LAUNDERING EQUIPMENT
    SHRINKAGE TESTER (Knit goods): U. S. Testing.
    SHRINK-O-METER: Eastman.
    SOCK MEASURING DEVICE, SCHIEFER: Frazier. Ref. 83, 84

SHRINKAGE TESTER - See SHRINKAGE IN LAUNDERING

SHRINK-O-METER - See SHRINKAGE IN LAUNDERING

SNAG RESISTANCE - See HOSIERY TESTERS

SPRAY RESISTANCE - See WATER RESISTANCE

STIFFNESS (Ref. 85, 86, 87, 88) - Also see FLEXURAL CHARACTERISTICS
    American Instrument; Frazier; Gurley; Mico; Olsen; Penderson; Saxl; Testing Machines; Thwing.

STRENGTH, BREAKING AND ELONGATION, TEARING (Ref. 89, 118, 119, 120)
    American Textile; Baldwin; Dillon; Instron; Olsen; Perkins; Saxl; Scott; Suter; Testing Machines; Thwing; U. S. Testing.
    INCLINE PLANE TESTING MACHINE: Scott. Ref. 90, 91
    TEARING TESTER, ELMENDORF: Thwing. Ref. 92

STRENGTH, BURSTING (Ref. 118, 119, 120)
    BALL BURST TESTER: Scott. Ref. 93
    MULLEN TESTER: Perkins; Suter. Ref. 94
    PARABOLIC RAM BURST TESTER: Perkins.

STRENGTH OF FIBERS AND YARNS
    American Textile; Dillon; Saxl; Scott; Suter.
    EXTENSOMETER, CAMBRIDGE FIBRE: See FLEXURAL CHARACTERISTICS
    FIBER STRENGTH TESTER, PRESSLEY: Doebrich. Ref. 73

STRENGTH, TEARING - See STRENGTH, BREAKING AND ELONGATION, TEARING

TENSION
    Boulin; Dillon; Federal; Saxl; Uster.
    TENSION METER, SAXL: Saxl. Ref. 95
    THREAD TENSION GAGE, USTER: Uster.

TERG-O-TOMETER - See LAUNDERING EQUIPMENT

THERMAL TRANSMISSION
    THERMAL TRANSMISSION APPARATUS, NBS. Ref. 96

THICKNESS - Also see COMPRESSIONAL CHARACTERISTICS
    American Instrument; Ames; Federal; Glogau; Precision; Randall; Standard Gage; Suter; Testing Machines.

THREAD COUNT (Yarns per unit distance in fabrics)(Ref. 97, [illegible])
    Glogau; Precision; Sjostrom; Suter; Testing Machines; U. S. Testing.
    LUNOMETER: Eberly.
    MICRO-LINE COUNTER: Micro.
    PICK-O-METER: Sjostrom.

TUFT LENGTH MEASURING DEVICE (for pile yarns in carpets and other pile fabrics): Frazier. Ref. 1

TWIST (Ref. 99, 100, 119, 120):
    Scott; Suter; Testing Machines; U. S. Testing.

WASHING MACHINES - See LAUNDERING EQUIPMENT

WATER RESISTANCE (Ref. 101, 120, 121)
    HYDROSTATIC PRESSURE TESTER: Richmond; Suter; U. S. Testing. Ref. 102
    HYDROSTATIC TEST SPECIMEN HOLDER, AATCC: A.A.T.C.C. Ref. 102, 103, 104, 105, 108
    IMPACT-PENETRATION SPRAY HEAD, AATCC: A.A.T.C.C. Ref. 103, 106, 107
    SPRAY-RATING UNIT: SPRAY NOZZLE, METAL HOOP, AND RATING CHART, AATCC: A.A.T.C.C. Ref. 103, 108, 109, 110
    RAIN TESTER, AATCC: Mico. Ref. 103, 111, 112

WEAR - See ABRASION RESISTANCE, CARPET; CLOTH; YARN

WEATHER-OMETER - See WEATHER RESISTANCE

WEATHER RESISTANCE
    NATIONAL WEATHERING UNIT: Atlas. Ref. 113, 114
    WEATHER-OMETER: Atlas. Ref. 115

WEIGHT - Also see YARN NUMBER
    Ainsworth; Andrew; Becker; Boder; Fisher; Gurley; Suter; Thomas, Arthur H.; Thomas Balance; Torsion; Troemner; Voland.

WRINKLING - See CREASE RESISTANCE AND CREASE RECOVERY

YARN NUMBER (Ref. 116, 120) - Also see WEIGHT; YARN REELS
    YARN AND CLOTH ANALYZING SET: Suter.
    YARN NUMBERING BALANCE, UNIVERSAL: Suter.

YARN REELS:
    Ainsworth; Becker; Suter; Testing Machines.

III. SUPPLIERS

AATCC (American Association of Textile Chemists and Colorists)
Lowell Textile Institute
Lowell, Mass.

Abbeon Supply Co.
58 - 10 41st Drive
Woodside, New York, N. Y.

Ainsworth, Wm., and Sons, Inc.
2151 Lawrence St.
Denver, Colo.

Akron Machinery and Engineering Co
914 Miami St.
Akron, Ohio

American Cyanamid Co.
Stamford Research Laboratories
Stamford, Conn.

American Instrument Co., Inc.
8030 Georgia Ave.
Silver Spring, Md.

American Laundry Machine Co.
Cincinnati, Ohio

American Optical Co.
Scientific Instrument Division
Box A
Buffalo 15, N. Y.

American Textile Engineering Co.
Arlington, N. Y.

Ames, B. C., Co.
12 Ames St.
Waltham 54, Mass.

Analytical Measurements, Inc.
585 Main St.
Chatham, N. J.

Anderson Machine Shop, Inc.
Brook Rd.
Needham Heights 94, Mass.

Andrew Technical Service
3805 N. Clark St.
Chicago 13, Ill.

Atlas Electric Devices Co.
361 W. Superior St.
Chicago 10, Ill.

Baird Associates
University Rd.
Cambridge 38, Mass.

Baker, J. T., Chemical Co.
Phillipsburg, N. J.

Baldwin-Southwark Corp.
Paschall P. O.
Philadelphia, Pa.

Bausch & Lomb Optical Co.
635 St. Paul St.
Rochester 2, N. Y.

Becker, Christian
92 Reade St.
New York, N. Y.

Berkeley Testing Service
1041 Winchester Ave.
Martinsburg, W. Va.

Boder Scientific Co.
719 Liberty Ave.
Pittsburgh 22, Pa.

Boulin Instrument Corp.
65 Madison Ave.
New York 16, N. Y.

Brabender Corp.
Rochelle Park, N. J.

Burrell Corp.
2223 Fifth Ave.
Pittsburgh 19, Pa.

Burrows Equipment Co.
Dept. 4B
1316 Sherman Ave.
Evanston, Ill.

Cambridge Instrument Co., Inc.
Grand Central Terminal
New York 17, N. Y.

Carrier Corp.
Syracuse, N. Y.

Central Scientific Co.
1702 Irving Park Rd.
Chicago 13, Ill.

Coleman Instruments, Inc.
318 Madison St.
Maywood, Ill.

Custom Scientific Instruments, Inc.
541 -543 Devon St.
Arlington, N. J.

de la Rue, Mrs. A. M.
3406 Lancer Drive
Hyattsville, Md.

Dillon, W. C., and Co., Inc.
5410 W. Harrison St.
Chicago 44, Ill.

Doebrich, Joseph M.
P. O. Box 2789
Tuscon, Ariz.

Eastman-Lakebrook Textile Co.
P. O. Box 118
North Andover, Mass.

Eberly, John A.
Reading, Pa.

Eimer and Amend
635 Greenwich St.
New York 14, N. Y.

Electric Household Utilities
Corp.
Hurley Machine Division
Cermak Rd. and 54th Ave.
Chicago, Ill.

Emerson Apparatus Co.
171 Tremont St.
Melrose 76, Mass.

Ewing, Robert, and Sons, Inc.
Green Island, N. Y.

Federal Products Corp.
1144 Eddy St.
Providence 1, R. I.

Fisher Scientific Co.
717 Forbes St.
Pittsburgh 19, Pa.

Franklyn & Young Toolworks, Inc.
Syracuse, N. Y.

Frazier, Sherman W.
953 15th St., S. E.
Washington 3, D. C.

Fremont Tool and Die Co.
Fremont, Ohio

Friez Instrument Division
Bendix Aviation Corp.
1418 Taylor Ave.
Baltimore 4, Md.

Gardner Laboratory, Inc.
4723 Elm St.
Bethesda 14, Md.

General Electric Co.
Apparatus Dept.
Schenectady 5, N. Y.

Glogau and Co.
1910-14 Birchwood Ave.
Chicago 26, Ill.

Gurley, W. & L. E., Instruments
512 Fulton St.
Troy, N. Y.

Hamblett Machine Co.
Lawrence, Mass.

Harrington Engineering Co.
405 Lexington Ave.
New York 17, N. Y.

Hofmann, Alfred, and Co.
West New York, N. Y.

Hurley Machine Co.
Cermak Rd. and 54th Ave.
Chicago, Ill.

Independent Die and Supply Co.
St. Louis, Mo.

Industrial Tool and Engineering
Co.
3432 Ravenswood Ave.
Chicago, Ill.

Instron Engineering Corp.
2 Hancock St.
Quincy 71, Mass.

Instrument Development
 Laboratories, Inc.
163 Highland Ave.
Needham Heights 94, Mass.

Kearny Manufacturing Co., Inc.
Kearny, N. J.

Leeds and Northrup Co.
4908 Stenton Ave.
Philadelphia 44, Pa.

Leitz, E., Inc.
730 Fifth Ave.
New York, N. Y.

Lonergan Die Co.
Chicago, Ill.

Macbeth Corp.
Newburgh, N. Y.

Macbeth Daylight Corp.
227 W. 17th St.
New York, N. Y.

Magnetic Amplifier Corp., The
4 Condon St.
Waltham, Mass.

Mallinckrodt Chemical Works
Mallinckrodt St.
St. Louis 7, Mo.

Merck and Co.
Rahway, N. J.

Mico Instrument Co.
80 Trowbridge St.
Cambridge 38, Mass.

Micro-Lite Co., Inc.
44 W. 18th St.
New York 11, N. Y.

Minneapolis-Honeywell
 Regulator Co.
Brown Instruments Division
Wayne and Roberts Aves.
Philadelphia 44, Pa.

Moisture Register Co.
Dept. G
1510 W. Chestnut St.
Alhambra, Calif.

Monsanto Chemical Co.
Textile Chemicals Department
140 Federal St.
Boston 10, Mass.

National Technical Laboratories
814 Mission St.
South Pasadena, Calif.

Olsen, Tinius, Testing Machine Co.
Easton Rd.
Willow Grove, Pa.

Orange Machine & Manufacturing
 Co.
354 - 6 S. Jefferson St.
Orange, N. J.

Parks-Cramer Co.
Fitchburg, Mass.; Boston, Mass.;
Charlotte, N. C.

Perkin-Elmer Corp.
Glenbrook, Conn.

Perkins, B. F., and Son
Chicopee St.
Holyoke, Mass.

Penderson, [illegible] I., Co., Inc.
185 26th St.
Brooklyn 32, N. Y.

Phipps & Bird, Inc.
6th and Byrd Sts.
Richmond 5, Va.

Photovolt Corp.
95 Madison Ave.
New York 16, N. Y.

Precision Scientific Co.
3737 W. Cortland St.
Chicago 47, Ill.

Readex Microprint Corp.
26 W. 56th St.
New York, N. Y.

Randall, Frank E.
248 Ash St.
Waltham, Mass.

Richmond Machine Co.
3375 Richmond St.
Philadelphia, Pa.

Riggs and Lombard
Suffolk St.
Lowell, Mass.

Saxl Instrument Co.
Harvard, Mass.

Scott Testers, Inc.
105 Blackstone St.
Providence, R. I.

Shawmut Engineering Co.
195 Freeport St.
Boston, Mass.

Sheffield Corp.
Dayton 1, Ohio

Sherr, George, Co., Inc.
200 Lafayette St.
New York, N. Y.

Sjostrom Machine Co.
Lawrence, Mass.

Smith Drum Co.
Philadelphia, Pa.

Special Instruments Laboratory
1003 Highlands Ave.
Knoxville, Tenn.

Speizman, Morris, Co.
508 W. 5th St.
Charlotte, N. C.

Standard Electronics Research
Corp.
2 E. End Ave.
New York 21, N. Y.

Standard Gage Co.
80 Parker Ave.
Poughkeepsie, N. Y.

Suter, Alfred
200 Fifth Ave.
New York , N. Y.

Switzer Bros., Inc .
1220 Huron Rd.
Cleveland 15, Ohio

Taber Instrument Corp.
111 Goundry St.
North Tonawanda, N. Y.

Tenney Engineering, Inc.
26 Avenue B
Newark 5, N. J.

Testing Machines, Inc .
431 West 42nd St.
New York, N. Y.

Thomas, Arthur H.
West Washington Square
P. O. Box 669
Philadelphia, Pa.

Thomas Balance Co.
818 20th St.
Denver, Colo.

Thwing-Albert Instrument Co.
Penn St. and Pulaski Av.
Philadelphia 44, Pa.

Torsion Balance Co.
92 Reade St.
New York, N. Y.

Troemner, Henry
909 Arch St.
Philadelphia, Pa.

Ultra-Violet Products, Inc.
Dept. A. D. R.
South Pasadena, Calif.

United Shoe Machinery Corp.
Die Plant
117 East Frederick St.
Binghamton, N. Y.

United States Testing Co., Inc.
1415 Park Ave.
Hoboken, N. J.

Vector Corp.
2516 Wilkinson Blvd.
Charlotte, N. C.

Voland and Sons, Inc.
New Rochelle, N. Y.

Western Electrical Instruments
Corp.
614 Frelinghuysen Ave.
Newark 5, N. J.

Will Corporation
P. O. Box 1050
Rochester 3, N. Y.

Wyzenbeek and Staff, Inc.
838 West Hubbard Ave.
Chicago 22, Ill.

Zeiss, Inc.
485 Fifth Ave.
New York 16, N. Y.

IV. LITERATURE REFERENCES

1. WEAR TESTING OF CARPETS. Herbert F. Schiefer. Journal of Research of the National Bureau of Standards, Vol. 29, pp. 333-379; November 1942. Research Paper RP1505. Out of print.

2. TEXTILE TESTING IN GERMANY. Herbert F. Schiefer, Lyman Fourt, and Richard T. Kropf. Textile Research Journal, Vol. XVII, No. 11, pp. 689-713, December 1947; Vol. XVIII, No. 1, pp. 18-38, January 1948; Vol. XVIII, No. 2, pp. 89-101, February 1948. Textile Research Journal, 10 East 40th Street, New York 16, N. Y. 57 pages. May 1948. $3.50.

3. ABRASION RESISTANCE OF CLOTH; ROTARY PLATFORM (TABER) METHOD. Method 5306, Federal Specification CCC-T-191b, Reference 119.

4. ROTARY PLATFORM, DOUBLE HEAD METHOD in ASTM Designation: D 1175 - 51 T, 1951 ASTM Standards, Reference 120.

5. INDUSTRIAL FABRICS. G. B. Haven. Wellington Sears Co., 65 Worth Street, New York, N. Y. 741 pages. Second Edition 1941. $2.00.

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